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Homeland Security/Defense Initiatives

Probably the most significant aspect of Homeland Security/Defense initiatives is a secure government controlled and operated network designed to provide services for critical local, state, or federal government functions. Any network being considered by Homeland Security/Defense intelligence, operations and training must be free of bureaucratic processes that would impede or prevent the timely provisioning of providing alerts, response, and training required to meet the needs of any attack or catastrophe.

The ICN responded to the Request for Information (RFI) issued by the Office of Homeland Security in November 2001. The essential points of the ICN response are listed below:

- The ICN has elements that make it an effective advanced telecommunications infrastructure resource in the Homeland Security project.
 - The ICN is unique as an existing and functioning government telecommunications network that brings seven years of experience in advanced telecommunications networking to any Homeland Security/Defense program.
 - In this state, every citizen, every local, state, or federal agency is located within approximately ten miles of a high capacity, advanced telecommunications network endpoint. That network endpoint is capable of all voice, data, or video services.
 - The ICN currently has the capability to provide vertical (both up and down) and horizontal connectivity between governmental agencies
- ICN is an enterprise of state government. The ICN is not profit driven and integrates various services from private providers in services offered to authorized users. Since most users receive funding from local, state, or federal tax bases, ICN maximizes the users' financial resources potential.
- ICN hub is located in a secure location already connected with disaster relief agencies. Located in the lower level of STARC Armory, Johnston, Iowa, the ICN hub is located in a survivable location built to withstand natural disasters to the facility including tornados and earthquakes. The state disaster relief center is located in the same facility including space for FEMA during times of disaster.
- ICN has existing partnerships that would be beneficial to any Homeland Security/Defense project. Existing partnerships with the U.S. Department of Defense on projects affecting the Homeland Security/ Defense initiatives, place the ICN in position to move into a role in the and Homeland Security/Defense project.

Suggested **alternatives uses of the ICN** provided to Homeland Security by the ICN include:

- Utilize the ICN as a model architecture for Homeland Security/Defense. The ICN architecture utilizing ring topology, ATM switching, and dense wave division multiplexing could easily be a model state network. The ICN is positioned to become a secure network. In this role, ICN can offer technical and engineering consultation in the design and establishment of other states' networks.
- Utilize the ICN as an integrator for Homeland Security. No one carrier will be able to accomplish this buildout cost effectively. The best value to the taxpayer will be achieved if an integrator coordinates and standardizes various fiber and bandwidth to insure timeliness of delivery and quality of the infrastructure. ICN's status as a common carrier allows for wholesale purchasing or leasing of fiber or capacity for the project. The fact that the ICN is a governmental entity insures the motive for participation is not profit driven.

- Utilize the ICN as a Homeland Security/Defense Network Operations Center (NOC). The ICN hub is located in STARC Armory, Johnston, Iowa. The ICN's NOC has been operational for over seven years. This expertise exists to expand its role to encompass an Homeland Security/Defense project and fill the role of a primary, alternate, or regional NOC.
- Utilize the ICN as a test bed for Homeland Security/Defense applications. The ICN has been used several times by GSA (U.S. General Services Administration) as a test bed for federal government applications. The capacity available on the existing government network provides an available, cost effective testing opportunity for Homeland Security/Defense projects.
- Utilize the ICN an interim solution for Homeland Security/Defense. Guardnet, which utilizes ICN services in Iowa is in place and reaches all states. Although not as robust as GSA is seeking for a permanent solution, the existing network offers an interim option until a permanent solution can be set in place.

The Iowa Communications Network has a proven working network solution is a true telecommunications workhorse for state government in Iowa and for Homeland Security officials. This is the kind of resource that Homeland Security/Defense will emulate on a federal basis.

The Homeland Security/Defense objectives are far ranging and interconnectivity between the state, counties, and cities is paramount to effective security, recovery, and training operations. The ICN more than any other federal or state network is already positioned to accept those assignments immediately with an operational, high capacity, and interoperable network.

The State of Iowa has already made its investment in what was initially an educational distance learning video network. The ICN has materialized and matured into a multipurpose infrastructure that can also provide a solution for Homeland Security/Defense issues. Other states are just now recognizing the foresight and the vision demonstrated by Iowa's telecommunication infrastructure and are attempting to emulate the same network architecture.

Educational distance learning is as important today as at the conception of the Network. The value-added overlaying of Homeland Security/Defense solutions on existing educational services means that the citizens of Iowa are able to reap the interest on their investment. The cost of adding Homeland Security/Defense links are only incremental costs, rather than the cost in terms of dollars and time to build a supporting network infrastructure.

Iowa's first responders are fortunate to have a statewide network with the most extensive coverage of any other statewide network in the nation at their disposal.

JUDICIAL INITIATIVE

The Iowa Communications Network (ICN) provides services to the Judicial Branch including services to the Iowa Court Information Systems (ICIS), court offices, and judges' offices. The ICN provides video, voice long-distance, Internet connectivity, and data services to the Judicial Branch.

- The ICN provides 10 to 15 hours of video connectivity per month, which is used for meetings and conferences.
- A fully meshed data network of about 140 circuits connecting all ICIS main county offices and their satellite locations with the ICIS hub at Des Moines, is provided by the ICN.
- Voice long-distance service is provided for all Des Moines locations and many locations around the state.
- ICIS has recently initiated the Iowa Courts on Line. (ITD hosts their web service and the ICN provides the Internet service upon which it rides.) On the first day of service, the Iowa Courts on Line Website had over 60,000 hits. There are other related services planned to be added to this online application in the near future.
- Presently, the ICN is in the process of providing the telecommunications needs for the new Judicial Building currently under construction. The ICN will provide fiber and copper connections and possibly a telephone switch.

TELEJUSTICE INITIATIVE

The ICN provides services to facilitate the online activities of the court system between Iowa and other states.

- Through the use of the ICN full-motion video classrooms, hearings have been held where the defendant, judge, prosecutor, witnesses, and other court personnel are at different, and often distant locations. The ICN provides about 100 hours of video connectivity per month, which is used for hearings, depositions, isolating witnesses from defendants, and expert witness testimony. Prior to the use of video services, the transportation of court personnel was time-consuming and travel was costly. The transfer of prisoners was often either for a short period of time or unnecessary all together. The prisoner transfer is dangerous to Iowa citizens and costly as it included travel costs and additional guard salaries.
- Immigration hearings have been conducted via the ICN between ICN classrooms and out-of-state compressed video non-ICN sites in Chicago. Use of video services allowed the judge to remain at his home base and conduct hearings in Iowa without transporting an extensive staff of court recorders and translators. These video sessions not only provided an efficient method of service delivery, but also a cost effective one. Video hearings were conducted in one or two days rather than the weeklong set of hearings with the use of the ICN.

EMERGENCY MANAGEMENT DIVISION INITIATIVE

The ICN and the Emergency Management Division of the Department of Public Safety (EMD) have a long-standing partnership to provide the most reliable, efficient, and cost effective telecommunications services for the state's emergency needs. In conjunction with the Department of Public Safety, the ICN provides Frame Relay services for EMD's data connections to their county Emergency Operations Centers. The ICN Frame Relay service provides reliable, statewide data transfers for EMD.

- EMD's State Emergency Operations Center (SEOC), which is located in the lower level of the STARC Armory, can be used in times of emergency or for training, planning, and conferencing and is linked to the over 750 ICN full-motion video sites.
- In addition to providing the customary voice service for the division, the ICN also enhances the functionality of the SEOC.
 - The ICN has positioned the appropriate equipment to provide a redundant voice service for all of the work sites in the state Emergency Operations center
 - Voice connectivity and warning capabilities to and from the three nuclear power plants within the EMD area of responsibility are provided by the ICN. This configuration enables the power plants to comply with the various Federal requirements associated with these nuclear facilities.
 - The ICN's NOC serves as an integral part of EMD's full-time emergency response function. The NOC provides support on a 24-hour a day basis for all of EMD's telecommunications needs.

IOWA ARMY AND AIR NATIONAL GUARD INITIATIVE

The ICN provides telecommunications services to all 48 Iowa National Guard armories statewide, including the state-of-the-art STARC Armory and the Governor's Emergency Command Center, four Army aviation units and three Air National Guard bases. The unique ability of the ICN to provide real-time, full-motion video, compressed video, high-speed data transport, Internet, and long-distance voice services enables the Iowa National Guard to enjoy some of the highest unit readiness ratings nationally. The Iowa National Guard has fielded 56 ICN full-motion video classrooms, and these facilities are co-located within the individual armories around the state. The armories accounted for nearly 12,000 hours of video usage last year. The Iowa National Guard is also a large user of ICN provided voice services including long-distance, toll-free and calling card services

The ICN services allow the Iowa National Guard to provide decentralized statewide training capabilities that other states cannot provide.

- The recently completed statewide armory data circuit upgrade converted all of the National Guard locations from 56-kilobit data circuits to T-1 data circuits. This conversion increased data transmission speed by a factor of 20. This is of particular importance because of the Guard's increased use of desktop, which has high capacity requirements, for training purposes.

As a result of the events of **September 11, 2001**, the Iowa National Guard expects increased use of the ICN to provide telecommunications connectivity in support of homeland security. The Iowa Guard is the only state militia in the country equipped with as extensive a telecommunications network through the ICN.

- The Iowa National Guard is connected directly with the National Guard Readiness Center at the Pentagon, and discussions are ongoing with the U.S. Department of Defense to include the ICN in a national defense data network.
- The United States Army's Rock Island Arsenal has a node on the ICN, and serves as the 57th military ICN classroom. The unique geographic location of Rock Island provides the ICN with the possibility for expansion outside of the state without local exchange carrier (LEC) involvement to provide connectivity with the Illinois National Guard and the Illinois Century Network via U.S. Army owned fiber optic cable spanning the dam between Davenport and Rock Island, IL.

The National Guard's "showplace" Iowa Technology Center (ITC) and its prime contractor International Simulations Training Systems (ISTS), are also users of the ICN. Tasked with improving readiness by establishing and sustaining a premier high technology infrastructure, the ITC and ISTS develop and deliver on demand enhanced education and training solutions to the National Guard nationwide.

- The demand for ITC services is constantly increasing, and as a result, the ITC requested that the ICN design and build separate data network to support Army initiatives.
- Currently, the ITC has a semi-meshed data network connecting nine locations around the state with the ITC located in building B-3 at Camp Dodge. Additionally, in support of the ITC, the ICN has also installed fiber optic cable connecting the ISTS offices located at the Aurora Business Park in Urbandale.
- It is anticipated that the Iowa National Guard and the ITC will continue to place high demand on the ICN as Iowa establishes itself as the "Hub" of a nationwide defense network with an emphasis on homeland defense.

TELEMEDICINE INITIATIVE

The ICN provides authorized users full-motion video and dialable wideband services throughout the state. The ICN is the only provider of dialable wideband video services in the State of Iowa. This link allows the medical community large urban medical centers and rural sites to videoconference on a statewide basis.

The Iowa Health Network, an arm of Iowa Methodist Medical Center (IMMC), links nine locations statewide via the dial able wideband service. They primarily use the link for medical education and meetings. Sixty percent of the IMMC classroom's usage is allocated for physician consultations. Doctors in Des Moines use the classroom to consult with physicians at Veterans Hospitals throughout the state. The Iowa Health Network uses the ICN full-motion video and dialable wideband networks approximately 125 hours monthly.

The Midwest Rural Consortium, a network of 30 Mercy clinics and hospitals statewide, uses the video link to conduct clinical evaluations, educational, and informational meetings.

- The video link allows physicians in Des Moines to conduct patient evaluations with the rural network sites. Tele-radiology equipment connects to the network allowing x-rays and vital patient data to be sent simultaneously during the video consultation.
- The Mercy network also uses video recording of patient consultations and sends it to Des Moines via the ICN. This allows the specialist to review the video and provide diagnosis at a later date.

- Mercy employs the video network to link the Mayo Clinic in Rochester, Minnesota. The hospital partners with Mayo in a residency program. The video network permits Mayo to consult with their medical students and patients in Des Moines.
- The consortium uses their network for meetings. In October 2001, 1,500 people at 20 video sites attended a meeting on medical preparedness for terrorist attacks.
- The consortium averaged 254 hours of monthly usage on the network last year. They predict video usage will continue to grow in the future as it has proven to save time and travel costs, as well as providing a valuable medical link to rural Iowa.

Veterans Hospital in Des Moines conducts diagnostic consultations with satellite clinics in Fort Dodge and Marshalltown. Primarily used for mental health patients, the network allows physicians in Des Moines to consult with patients at the satellite locations. They currently use the network 40 hours monthly.

The Department of Corrections medical staff in Oakdale is able to perform mental health and basic exams over the network. The benefits are immense. It was estimated the cost to transport a prisoner to Oakdale could run as high as \$600 per visit. The telemedicine service reduces not only time and travel costs, but also security to the public, as the prisoner never leaves the correctional facility.

The Veterans Home in Marshalltown realized savings of \$ 24,000 last year in travel and administrative costs by using the ICN services for Telemedicine applications. Specialists from the Veterans Hospitals in Des Moines and Iowa City conduct follow-up evaluations with patients at the Veterans Home monthly. The Veterans Home currently uses the network approximately 20 hours a month, but plans increased usage in the future.